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ABSTRACT

The Planning Unit is a concept employed in resource requirements forecasting for the public service agencies, as an alternative to the conventional hierarchical program-structure used in PPB systems. The planning unit concept allows analysts to generate cost analyses by several simultaneous program-structures, not all of which need be in a conventional pyramid form from program-to-activity. Thus, the creative options of the planner are extended, without a requirement for reprograming. The planning unit approach is a recommended alternative to the fixed program accounting approach, in which the consistency and uniformity requirements of the accounting function tend to abridge the opportunities of the planner and, incidentally, obstruct some of the main early objectives of PPB technology. An illustration of the planning unit as part of a public school district resource requirements forecasting system is provided. (Printout exhibits on pages 13 and 18-27 may reproduce poorly.) (Author)

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The Planning Unit Concept:

An Alternative Approach to Program-Budgeting in Public Service Agencies

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Abstract

The Planning Unit is a concept employed in resource requirements forecasting for public service agencies, as an alternative to the conventional hierarchical program-structure used in PPB systems. The planning unit concept allows analysts to generate cost analyses by several simultaneous program-structures, not all of which need be in a conventional pyramid form from program-to-activity. Thus, the creative options of the planner are extended, without a requirement for reprogramming. The planning unit approach is a recommended alternative to the fixed program accounting approach, in which the consistency and uniformity requirements of the accounting function tend to abridge the opportunities of the planner, and, incidently, obstruct some of the main early objectives of PPB technology. An illustration of the planning unit as part of a public school district resource requirements forecasting system is provided in the paper.

Objectives

The purpose of this paper is to explain and illustrate an approach to resource requirements analysis which is of general value to any public agency which provides human services.* The output of the proposed method is a multi-year projection of costs and other resource requirements in program-budget format, or, more correctly, in as many different program-budget formats as the users desire.

The approach described is built on the "planning unit" concept, which, as will be shown, is different from the cost analysis concepts ordinarily associated with program-budgeting or PPB systems. It has been developed to overcome certain aspects of PPB which, because of either theoretical untenability or practical difficulty, have the effect of inhibiting strategic planning in public agencies.

The principal advantage of the proposed alternative is its flexibility. It allows the users to sustain more than one program structure, to use non-hierarchical program structures, and, further, to generate cost analyses in categories which are of practical interest to the users--even if they do not satisfy the requirements for rigorous system analysis of the organizational components.

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*The approach presented here was developed in part under a contract with the Trenton Public Schools, Trenton, New Jersey.

Limitations of Current PPB Systems

Historically, one of the main purposes of PPB reform has been to focus the attention of planners on aggregations of cost and resource utilization which are more "output" oriented than traditional object or function-object budgeting (2,4). By realigning the budgetary categories, it has been argued, budgetary decisions may be brought more logically into the goal-setting process of the agency, with the result that resources are to be tied to agency objectives, rather than antiquated accounting schemes. This redefinition of categories, however, is supposed to be more than a mere re-christening of the accounting codes; in contrast, it is supposed to be the result of a system analysis of the organization into its various output-producing components, with each component further analyzed into subordinate parts. The accounting code is to consist of a series of fields of characters, with the left-most field the broad program area and the right-most field the detailed activity or object of expenditure.

Aside from the fact that the typical program-structure has far too many levels to be useful in multi-year planning, the concept of the program-structure itself poses problems for the planner. The notion has gained prevalence that there are "correct" program-structures, and that others are incorrect. Despite the fact that systems analysis is both

an artistic and technical process, many areas of the public sector (education particularly) have behaved as though one could determine the correct componential structure of an organization, and, once one had, could "freeze" the program-structure in the agency and in all agencies with similar missions. The most telling manifestation of this confusion are discussions about what a program "really is" in a given agency (3).

The important idea that is lost in this confusion is that a program-structure is little more than an analytic fantasy about an organization, and its "correctness" is little more a function of its conceptual suitability to the planners, managers, and clients of the agency. To assert that a "school" or a "hospital" cannot be considered a "program," or that it cannot appear higher in the program structure than the service types provided in the school or hospital is to insist that there is a correct answer to what is really a question of judgment. Similarly, to impose a single program-structure for all similar agencies in a state, for instance, is to impose one agency's judgment on all the others--thereby inhibiting the analytic opportunities available to the diverse planners.

A program-structure is only a model of an organization. In any given organization, at any given time, it may be of interest to planners and decisionmakers to entertain more

than one model--including models which are more aligned with the administrative structure than with the goal/program structure. To the degree that a single program-structure is permanently installed, and to the degree that this structure is "wired-in" to the budgeting and accounting software used by planners, the opportunities for innovative analyses are inhibited. It must be remembered that the main goals of accounting are consistency and uniformity; these goals may be irrelevant to planning and program development. The planning unit concept is offered as a preferable alternative.

The Planning Unit

A planning unit is a loosely defined cost or activity center, whose specification is the responsibility of the planner. In general, a planning unit has the following characteristics:

a. It is indivisible, that is, it is the smallest unit of activity with which the planner is concerned. (Even though the person managing the unit may divide it into parts for his own purposes, the planner does not.) A plan is defined as a unique set of planning units. Alternative plans are generated by adding, subtracting, or replacing planning units--but planning units may not be fractionally included or excluded.

b. A planning unit is completely contained in one program; if several program structures are used, the planning unit may appear in different programs each time, but always as a complete unit. If "site" or "facility" is used as a program structure logic, then planning units are constrained to one site; if "clients served" is the basis of the program structure, then a planning unit must be wholly associated with one client group.

c. The activities in a planning unit are, or can be placed, under a single supervisory person. Whatever is called a planning unit, thus, must be assignable to some person in the administrative organization, even though several units may be assigned to a single person.

For purposes of resource requirements planning, there need be usually only two levels in the program-structure: the program level and the planning unit level. The users may, however, elect to introduce levels between the two. These intermediate levels may be hierarchical (with planning units at the base of a pyramid), or, if judged appropriate, the structure may be non-hierarchical, with some major programs consisting of one planning unit, while others consist of scores, and so forth. Technically, one need not have any program structure at all, save for the list of planning units themselves.

In typical service agencies, it is useful to consider planning units as having a status: in the illustration provided in this paper, a planning unit may be either:

a. a program (or sub-program), that is a continuing set of basic activities in the agency which are expected to continue indefinitely (e.g., "reading instruction," or "health examinations,")

b. a project (or sub-project), that is a set of activities with a fixed outcome and schedule, such that the unit will go out of existence when the outcome is achieved (e.g., a construction project), or

c. a project design (or sub-project design), that is a planned set of activities which is being considered for implementation in the agency (5).

In that part of the planning process concerned with resource requirements analysis, the planning units are the basic categories for describing the current resource utilization in the agency. In addition, they are the basis for forecasting multi-year resource requirements; a multi-year resource requirements projection is generated for each planning unit, showing the number of staff positions by staff type, the salary and salary-plus-benefits costs for each staff type, the capital costs, and the remaining non-staff/non-capital costs (which, in most service agencies are a relatively small

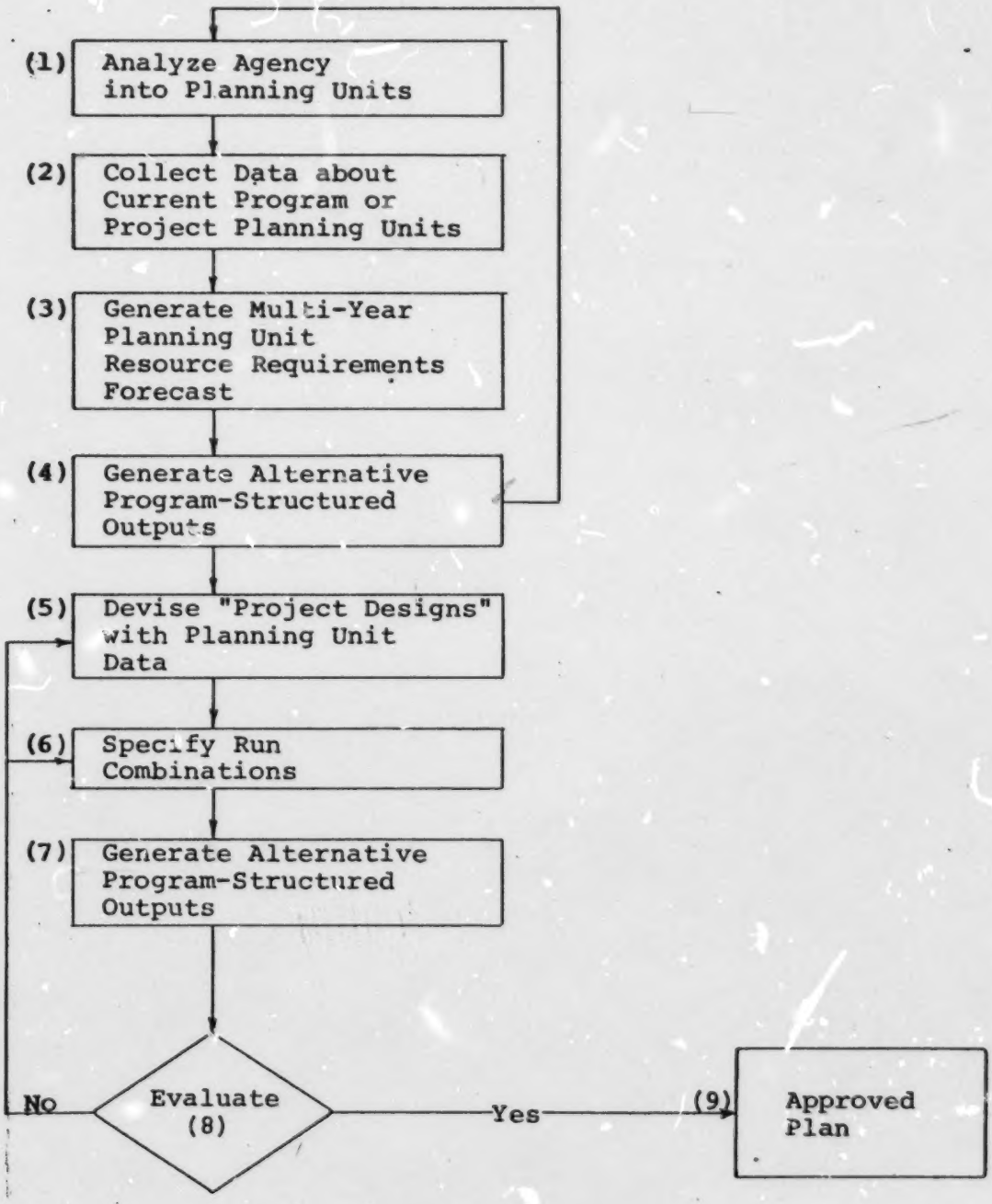
proportion of the total). At the discretion of the user, overhead costs may be shown within the direct service planning units, or separate "support" programs may be created.

The resource requirements for an agency, in a given period, are simply the sum of the planning unit requirements for that period. By basing the forecast on precise current data about planning units, and by choosing forecasting models appropriate to the particular unit, the overall projection is probably more accurate than those based on aggregate planning factors, such as average staff-client ratios, turnover rates, or salary inflation projections. Note that the planning unit approach can be used to generate both forecasts of the long-range requirements for current programs and projects, and also the alternative requirements for alternative plans. By providing estimated planning unit data for "project designs," and by specifying various combinations of these added planning units, the planners may generate several multi-year projections, each showing the resource requirements impact of adding (or substracting) services to the agency's programs. In this conception, the "best plan" is that set of planning units which, if implemented, hold the greatest promise of achieving the agency's goals and objectives. The process of selection is, of course, iterative; planners may specify alternative combinations of project design planning units, or create additional project designs, until an acceptable plan is found.

Figure 1 reviews the process. In each cycle of the planning process, the agency is analyzed into planning units, and data is collected on the characteristics of each unit. (Note that anticipated program-structure categories influence the analysts in determining the size and boundaries of planning units. The more different program-structures, the more constraints on planning unit definition.) Forecasting models are used to generate a multi-year resource requirements projection for each planning unit. The planning unit forecasts become a data set, from which program-structured output reports and analyses are generated. These projections of current operational resource requirements are the basis for agency review and subsequent project designs to achieve new agency objectives or satisfy agency financial constraints. (Note: A "negative project design" is a set of planning units with negative resources, that is, elimination of staff and services from programs.) Various sets of project designs are specified as candidate alternative plans for the agency and run through the same forecasting and report generating procedures. (Note: If the analysts wish to run every possible combination of project designs, the number of possible alternatives is 2^N-1, where N = the number of project designs.) These alternatives are evaluated for expected effectiveness and cost; if an acceptable plan is found, it is approved and becomes the basis for the agency's

Figure 1

Resource Requirements Analysis
Using the "Planning Unit" Concept


(1) Analyze Agency into Planning Units
(2) Collect Data about Current Program or Project Planning Units
(3) Generate Multi-Year Planning Unit Resource Requirements Forecast
(4) Generate Alternative Program-Structured Outputs
(5) Devise "Project Designs" with Planning Unit Data
(6) Specify Run Combinations
(7) Generate Alternative Program-Structured Outputs
Evaluate (8)
No
Yes
(9) Approved Plan

next budget. If no acceptable plan is found, the process of designing projects and specifying run combinations is reiterated until a satisfactory outcome is reached (or until time is exhausted).

An Illustration of the Planning Unit Approach

This section describes the resource requirements module of the System for Trenton's Educational Planning--STEP-RRM (1). The module provides four alternative resource requirements reports: The Planning Unit Report; the Program Report (subsuming projects); the Project Report; and the Site Report (an alternative program structure). Each of these reports can be generated for current programs and projects (known as the "base case" plan) or for planned alternatives. Each report includes:

(1) The number of positions, by each of fifteen staff types, for Year 1-Year 5. (Staff types are variable.)

(2) The salary cost, fringe benefit cost, and total, for Year 1-Year 5.

(3) The total capital outlay cost, Year 1-Year 5.

(4) The total non-staff/non-capital outlay cost, Year 1-Year 5.

(5) The total gross cost, and the total local cost.

(6) The total expected positions, by staff type, and total "hires," Year 1-Year 5.

(7) Subsidiary data on planning factors.

These data elements are relatively constant in each of the reports generated by the module; the differences are in the level or focus of aggregation. In the Planning

Unit Report, the above information is displayed for each of the district's "planning units." In the Program Report, the information is aggregated in "programs," according to the district's current program structure; this report may be viewed as the "program budget" for the district, and will be produced to show actual expenditures for Current Year, as well as projected expenditures for Year 1-Year 5 in alternative plans. In the Project Report, planning unit information is re-aggregated into project summaries, and in the Site Report, planning unit information is aggregated to provide summaries of cost and resource requirements by site - a report that will prove especially interesting and valuable to building administrators.

There are several functions served by this module. Obviously, it is important to project the staff and financial resources required to continue current programs or future alternatives. In addition, the complicated effects of such variables as inflation and staff turnover rates are reflected in the forecasts, in a way that would be almost infeasible without automated computation.

STEP-RRM operates by taking detailed, current year data about the "planning units" in the district, along with other inputs about staff costs and turnover in the district, and, using a combination of forecast options available to the planners, projects the five-year staff requirements and costs

for each planning unit. These planning units are then aggregated into larger clusters, e.g., programs, projects, sites, or the whole district, to produce the main planning reports.

The data on which the forecasts are based is relatively simple. For each planning unit, users input identification data and information about the current staff, capital outlay, and other resources being utilized in the unit. In addition, appropriate enrollment information (taken from the enrollment forecasting procedure) is input to the planning unit description, along with estimates of categorical or "project" monies expected to accrue to the unit. (See Figure 2.) After data is collected for each planning unit, district data is added: mainly, the "fringe benefit percentage" associated with each staff type, the expected turnover rates associated with each type, and the forecast options chosen for each resource type in each planning unit. The resource requirements model then proceeds to incorporate the effects of projected enrollment change, inflation, turnover rates, and other relevant variables, according to the forecast options selected by the users (see Table 1), and produces cost/resource requirements projections for Year 1-Year 5. Figure 3 shows the summary flow of information and calculation in the forecaster.

Exhibit III.3-xiii

Resource Requirements Module
Planning Unit Data Form

TSD-PRM-5905

1. Prepared by	2. Date	3. Run	4. Type Unit

5. Planning Unit Descriptive Characteristics

A. Card Type Number	B. Card Type Identifier	C. Date	D. Planning Unit Name	E. Planning Unit Code
10 (1 2)	PUDS (3 6)	0971 (7 10)	EARLY CHLDHD-COLUMBUS (11 42)	0104 (43 46)

F. Site Code	G. Program Code	H. Project Code	I. Status Code	J. CO Forecast Option
0004 (47 50)	01 (51 52)	0000 (53 56)	SUBP (57 60)	02 (61 62)

6. Planning Unit Enrollment, Revenue, and CO Data - CY and Y1-Y5 (if appropriate).

A. Data Type	B. Card No. (CN)	C. Card Iden. (CT)	D. Date Mo. Yr.	E. PU Code	F. Years - (1) 71-72	CY, Y1-Y5 (if appropriate) (2) 72-73	(3) 73-74	(4) 74-75	(5) 75-76	(6) 76-77
Card Columns	1 2	3 6	7 10	11 14	15 22	23 30	31 38	39 46	47 54	55 62
I. Enroll	11	PENR	0971	0104	53	54	56	57	59	61
II. NCEREV	12	PNCE	0971	0104	0	0	0	0	0	0
III. CO	13	PUCϕ	0971	0104	117					

7. Planning Unit Non-Staff Non-Capital Costs (NSNCO)

A. NSNCO Cost Type	B.	C. CT	D. Date Mo. Yr.	E. PU Code	F. No. or Cost Type Code	G. Option Code	H. Years - CY, Y1-Y5 (if appropriate) not required for Line 1 of Part 7. 1 71-72 CY	2 72-73 Y1	3 73-74 Y2	4 74-75 Y3	5 75-76 Y4	6 76-77 Y5
Card Column	1 2	3 6	7 10	11 14	15 18	19 20	21 28	29 36	37 44	45 52	53 60	61 68
No. of NSNCO Cost Types	14	PNSD	0971	0104	0002							
I.	15	PNSC	0971	0104	0001	02	1520					
II.	15	PNSC	0971	0104	0002	02	1287					
III.	15											
IV.	15											

Figure 2

Planning Unit Data Input Form

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Table 1

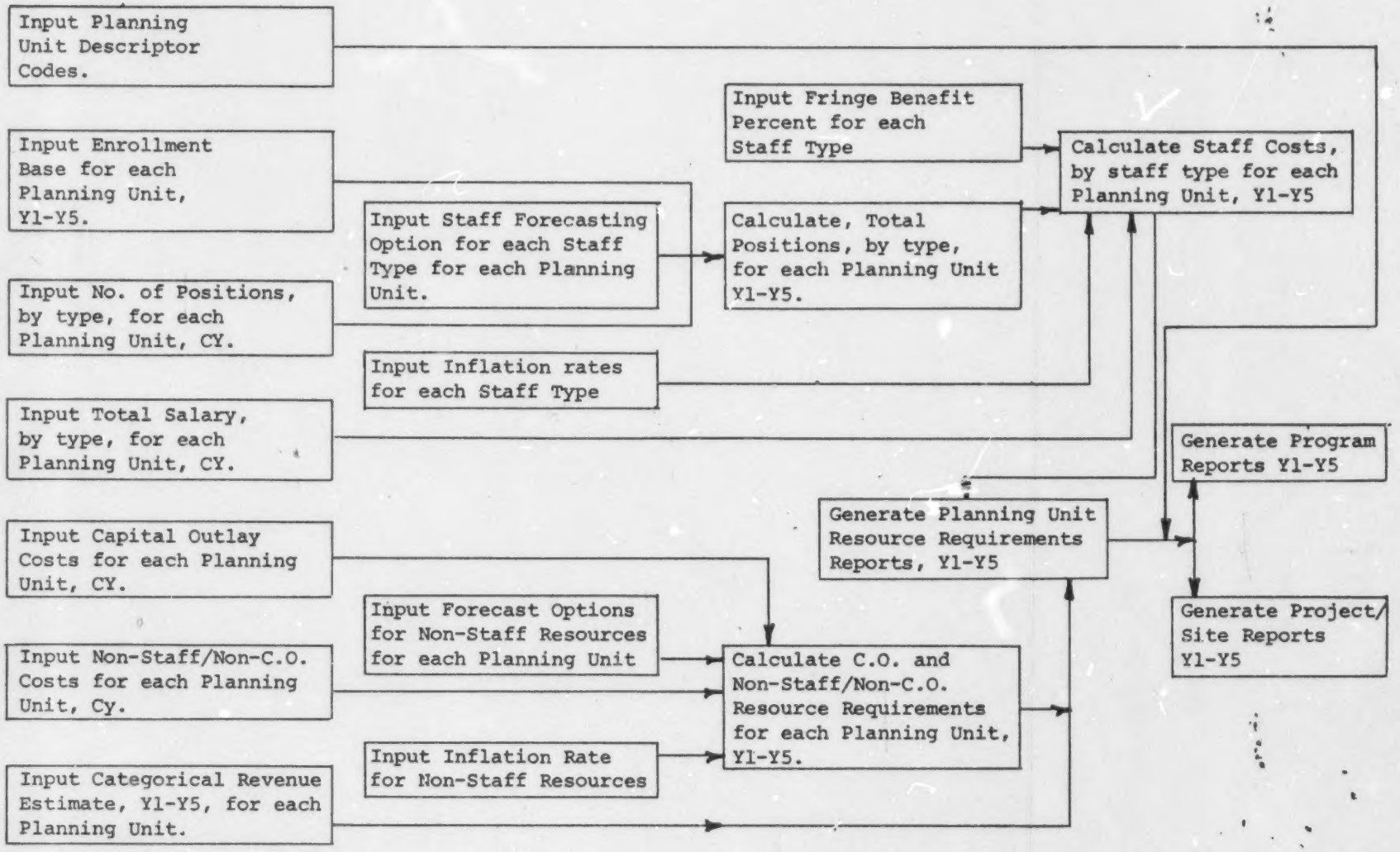
Options for Resource Requirements Projection

COST FORECAST OPTION CODE	EXPLANATION
01	User estimates Y1-Y5 costs (or number of positions) and CY and Y1-Y5 data is input.
02	CY cost data only is input. Y1-Y5 cost data will be calculated taking into account inflation.
03	CY cost data only is input. Y1-Y5 cost data will be calculated taking into account inflation and a planning factor directly related to planning unit operations.*

*That is, proportionate to such variables as client demand (student membership), or to some other base; staff type A may vary proportionately to staff type B, for example.

Figure 3

Summary Flow; Cost/Resource Requirements Forecaster


Input Planning Unit Descriptor Codes.
Input Enrollment Base for each Planning Unit, Y1-Y5.
Input No. of Positions, by type, for each Planning Unit, CY.
Input Total Salary, by type, for each Planning Unit, CY.
Input Capital Outlay Costs for each Planning Unit, CY.
Input Non-Staff/Non-C.O. Costs for each Planning Unit, Cy.
Input Categorical Revenue Estimate, Y1-Y5, for each Planning Unit.
Input Fringe Benefit Percent for each Staff Type
Input Staff Forecasting Option for each Staff Type for each Planning Unit.
Input Inflation rates for each Staff Type
Input Forecast Options for Non-Staff Resources for each Planning Unit
Input Inflation Rate for Non-Staff Resources
Calculate, Total Positions, by type, for each Planning Unit Y1-Y5.
Calculate C.O. and Non-Staff/Non-C.O. Resource Requirements for each Planning Unit, Y1-Y5.
Calculate Staff Costs, by staff type for each Planning Unit, Y1-Y5
Generate Planning Unit Resource Requirements Reports, Y1-Y5
Generate Program Reports Y1-Y5
Generate Project/ Site Reports Y1-Y5

Outputs of the STEP-RRM

To illustrate the outputs of the module, five exhibits are provided.

Exhibit A is a sample Planning Unit report, for "Early-Childhood-Columbus," a cluster of students in the Columbus elementary School (a sub-program). Notice that the report includes five-year projections of positions, staff costs, and other resource requirements.

Exhibit B is a projection of requirements for the entire Early Childhood program in the district (all activities for pre-schoolers and kindergarten). Notice that the data is based on planning units projections from twenty-three sites, listed on the second page of the report.

Exhibit C is a project report, for the "Disadvantaged Project" (activities funded by ESEA Title 1), a composite of thirteen planning units, not all of which are in the same program.

Exhibit D shows projected resource requirements for the Columbus School site, a facility in which four planning units, from four different programs, are operating.

The fifth exhibit, E, is an excerpt from the district summary report, showing total costs in projections, by cost type; in the subsidiary data are a list of the

fifteen staff types used in this analysis (they may be varied), the input rates for staff turnover, salary inflation, and fringe benefit proportions, and an analysis of the number of positions by staff type, for the entire agency, both numbers of positions and number of "hires".

PLANNING UNIT REPORT FOR BASE CASE

PLANNING UNIT NAME: EARLY CHLDHD-COLUMBUS CODE: 104 SITE: COLUMBUS SCHOOL

PROGRAM MEMBERSHIP: EARLY CHILDHOOD INSTRUCTION PLANNING UNIT STATUS: SUBP

CURRENT EXPENSE STAFF COSTS	CY	Y1	Y2	Y3	Y4	Y5
PRINCIPALS/VICE PRINCIPALS FORECAST OPTION CODE = 2						
NUMBER OF POSITIONS	0.13	0.13	0.13	0.13	0.13	0.13
SALARY COST	1976	2114	2262	2421	2590	2771
FRINGE BENEFIT COST	395	423	452	484	518	554
STAFF COST	2371	2537	2714	2905	3108	3325
TEACHER A-EC,PRIMARY,ELEM FORECAST OPTION CODE = 3						
NUMBER OF POSITIONS	1.00	1.92	1.06	1.08	1.11	1.15
SALARY COST	10850	11829	13125	14295	15832	17515
FRINGE BENEFIT COST	2170	2366	2625	2859	3166	3503
STAFF COST	13020	14195	15750	17154	18998	21018
INSTRUCTINAL SPECIALIST FORECAST OPTION CODE = 3						
NUMBER OF POSITIONS	0.13	0.13	0.14	0.14	0.14	0.15
SALARY COST	1307	1425	1581	1722	1907	2110
FRINGE BENEFIT COST	261	285	316	344	381	422
STAFF COST	1568	1710	1897	2066	2288	2532
HEALTH PERSONNEL FORECAST OPTION CODE = 3						
NUMBER OF POSITIONS	0.13	0.13	0.14	0.14	0.14	0.15
SALARY COST	1417	1545	1714	1867	2068	2287
FRINGE BENEFIT COST	283	309	343	373	414	457
STAFF COST	1700	1854	2057	2240	2482	2744
OPER-MAINT-FACILITIES-NON AD FORECAST OPTION CODE = 2						
NUMBER OF POSITIONS	0.91	0.91	0.91	0.91	0.91	0.91
SALARY COST	3558	3807	4074	4359	4664	4990
FRINGE BENEFIT COST	712	761	815	872	933	998
STAFF COST	4270	4568	4889	5231	5597	5988
INSTRUC AIDES AND SUPP STAFF FORECAST OPTION CODE = 3						
NUMBER OF POSITIONS	0.13	0.13	0.14	0.14	0.14	0.15
SALARY COST	468	510	566	617	683	755
FRINGE BENEFIT COST	94	102	113	123	137	151
STAFF COST	562	612	679	740	820	906
CLERICAL-OFFICE PERSONNEL FORECAST OPTION CODE = 2						

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Exhibit A

NUMBER OF POSITIONS	0.13	0.13	0.13	[illegible]	1210	1295
SALARY COST	923	980	1057	1131	242	259
FRINGE BENEFIT COST	185	198	211	226	1452	1554
STAFF COST	1108	1186	1268	1357		
UNIT TOTALS						
NUMBER OF POSITIONS	2.56	2.59	2.64	2.66	2.72	2.77
SALARY COST	20499	22218	24379	26412	28954	31723
FRINGE BENEFIT COST	4100	4444	4875	5281	5791	6344
STAFF COST	24599	26662	29254	31693	34745	38067
NSNCO COST TYPE 1 FORECAST CODE = 2	1520	1596	1760	2037	2476	3160
NSNCO COST TYPE 2 FORECAST CODE = 2	1287	1351	1489	1724	2096	2675
TOTAL NSNCO COSTS	2807	2947	3249	3761	4572	5835
TOTAL CURRENT EXPENSE	27406	29609	32503	35454	39317	43902
CAPITAL-OUTLAY COST-FORECAST OPTION= 2	117	129	156	208	305	491
TOTAL PLANNING UNIT COST	27523	29738	32659	35662	39622	44393
TOTAL NON-CURRENT EXPENSE REVENUE	0	0	0	0	0	0
TOTAL LOCAL PLANNING UNIT COST	27523	29738	32659	35662	39622	44393

SUBSIDIARY DATA

	CY	Y1	Y2	Y3	Y4	Y5
ENROLLMENT BASE	53	54	56	57	59	61

	PUPIL-STAFF RATIO*	MEAN SALARY				
PRINCIPALS/VICE PRINCIPALS	NOT CALCULATED	15200.	16264.	17402.	18621.	19924.	21319.
TEACHER A-EC,PRIMARY,ELEM	53.00	10850.	11609.	12422.	13292.	14222.	15218.
INSTRUCTINAL SPECIALIST	407.69	10054.	10758.	11511.	12316.	13178.	14101.
HEALTH PERSONNEL	407.69	10900.	11663.	12479.	13353.	14288.	15288.
OPER-MAINT-FACILITIES-NON AD	NOT CALCULATED	3910.	4164.	4476.	4790.	5125.	5484.
INSTRUC AIDES AND SUPP STAFF	407.69	3600.	3852.	4122.	4410.	4719.	5049.
CLERICAL-OFFICE PERSONNEL	NOT CALCULATED	7100.	7597.	8129.	8698.	9307.	9958.

*NOTE: INTERPRET PUPIL-STAFF RATIO AS PUPILS PER ONE FULL-TIME EQUIVALENT STAFF

Exhibit A (continued)

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PROGRAM TITLE: EARLY CHILDHOOD INSTRUCTION PROGRAM CODE: 1

CURRENT EXPENSE STAFF POSITIONS AND COSTS BY STAFF TYPE	CY	Y1	Y2	Y3	Y4	Y5
CENTRAL ADMIN AND PROG MGRS						
NUMBER OF POSITIONS	2.00	2.00	2.00	2.00	2.00	2.00
SALARY COST	37450	40071	42876	45878	49089	52525
FRINGE BENEFIT COST	7490	8014	8575	9176	9818	10505
STAFF COST	44940	48085	51451	55054	58907	63030
PRINCIPALS/VICE PRINCIPALS						
NUMBER OF POSITIONS	2.74	2.74	2.74	2.74	2.74	2.74
SALARY COST	47004	50295	53816	57581	61610	65923
FRINGE BENEFIT COST	9401	10058	10763	11516	12325	13184
STAFF COST	56405	60353	64579	69097	73935	79107
ADMIN STAFF(PROF/TECHNICAL)						
NUMBER OF POSITIONS	1.99	2.06	2.12	2.19	2.26	2.34
SALARY COST	15153	16826	18689	20659	22970	25506
FRINGE BENEFIT COST	3031	3366	3721	4132	4594	5101
STAFF COST	18184	20192	22330	24791	27564	30607
TEACHER A-EC,PRIMARY,ELEM						
NUMBER OF POSITIONS	50.00	51.52	53.08	54.75	56.52	58.36
SALARY COST	521095	574714	633597	699489	772618	853777
FRINGE BENEFIT COST	104219	114943	126719	139896	154522	170755
STAFF COST	625314	689657	760316	839385	927140	1024533
INSTRUCTINAL SPECIALIST						
NUMBER OF POSITIONS	4.30	4.43	4.57	4.72	4.89	5.05
SALARY COST	44909	49523	54807	60676	67336	74456
FRINGE BENEFIT COST	8982	9925	10962	12133	13456	14891
STAFF COST	53891	59545	65769	72809	80862	89347
HEALTH PERSONNEL						
NUMBER OF POSITIONS	4.92	5.06	5.21	5.36	5.51	5.67
SALARY COST	43910	48325	53207	58612	64558	71264
FRINGE BENEFIT COST	8782	9667	10642	11721	12912	14253
STAFF COST	52692	57992	63849	70333	77470	85517
OPER-MAINT-FACILITIES-NON AD						
NUMBER OF POSITIONS	20.36	20.36	20.36	20.36	20.36	20.36
SALARY COST	73407	78545	84044	89927	96220	102955
FRINGE BENEFIT COST	14681	15708	16809	17987	19245	20593
STAFF COST	88088	94253	100853	107914	115465	123549
INSTRUC AIDES AND SUPP STAFF						
NUMBER OF POSITIONS	21.03	21.64	22.19	22.81	23.35	24.12
SALARY COST	69748	76796	84254	92653	101481	112142
FRINGE BENEFIT COST	13950	15358	16851	18530	20296	22428
STAFF COST	83698	92154	101105	111183	121777	134570

Exhibit B

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CLERICAL-OFFICE PERSONNEL

NUMBER OF POSITIONS	7.24	6.73	7.27	7.29	7.30	7.31
SALARY COST	36046	36870	42174	45254	48588	52113
FRINGE BENEFIT COST	7329	7377	8432	9051	9719	10423
STAFF COST	43375	44247	50606	54305	58307	62536

MISCELLANEOUS

NUMBER OF POSITIONS	1.16	1.17	1.17	1.18	1.19	1.20
SALARY COST	9235	9927	10583	11495	12383	13313
FRINGE BENEFIT COST	1847	1985	2117	2299	2476	2662
STAFF COST	11082	11912	12820	13794	14859	15972

STAFF TOTALS FOR THE PROGRAM

NUMBER OF POSITIONS	115.74	117.72	120.71	123.39	126.12	129.15
SALARY COST	898557	981989	1078067	1182221	1296853	1423972
FRINGE BENEFIT COST	179712	196461	215611	236441	259373	284795
STAFF COST	1078269	1178390	1293678	1418662	1556226	1708768

TOTAL NSNCO COST	143325	150491	165917	192068	233458	297954
TOTAL CURRENT EXPENSE	1221594	1328881	1459595	1610730	1789684	2005722
CAPITAL OUTLAY COST	2876	3161	3826	5094	7459	12012
GROSS PROGRAM COST(CE+CO)	1224470	1332042	1463421	1615824	1797143	2018734
TOTAL NON-CURRENT EXPENSE REVENUE	0	0	0	0	0	0
TOTAL LOCAL PROGRAM COST	1224470	1332042	1463421	1615824	1797143	2018734

SUBSIDIARY DATA

PLANNING UNITS IN THE PROGRAM BY STATUS CODE

SUBPROGRAM STATUS CODE

103	EARLY CHLDHD-CADWALADER
104	EARLY CHLDHD-COLUMBUS
105	EARLY CHLDHD-CLCK
106	EARLY CHLDHD-FRANKLIN
107	EARLY CHLDHD-GRANT
108	EARLY CHLDHD-GREGORY
109	EARLY CHLDHD-HARRISON
110	EARLY CHLDHD-JEFFERSON
111	EARLY CHLDHD-MONUMENT
112	EARLY CHLDHD-MOTT
113	EARLY CHLDHD-PARKER
114	EARLY CHLDHD-ROBBINS
115	EARLY CHLDHD-STOKES
116	EARLY CHLDHD-WASHINGTON
117	EARLY CHLDHD-WILSON
119	EARLY CHLDHD-JUNIOR #2
120	EARLY CHLDHD-JUNIOR #3
121	EARLY CHLDHD-JUNIOR #5
9902	EARLY CHLDHD-HEADSTART

PROJECT STATUS CODE

NONE

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Exhibit B (continued)

PROJECT TITLE: PROJ DISADV-TITLE I ELEM PROJECT CODE: 914

CURRENT EXPENSE STAFF POSITIONS AND COSTS BY STAFF TYPE	CY	Y1	Y2	Y3	Y4	Y5
CENTRAL ADMIN AND PROG MGRS						
NUMBER OF POSITIONS	3.25	3.25	3.25	3.25	3.25	3.25
SALARY COST	62504	68042	72813	77909	83356	89191
FRINGE BENEFIT COST	13714	13611	14560	15587	16686	17856
STAFF COST	76310	81653	87373	93496	100042	107046
TEACHER A-EC,PRIMARY,ELEM						
NUMBER OF POSITIONS	50.00	52.05	54.11	56.16	58.21	60.27
SALARY COST	488273	543704	604504	671155	744147	824119
FRINGE BENEFIT COST	97656	108740	120902	134233	148831	164825
STAFF COST	585929	652444	725406	805385	892998	988943
FOOD SERVICES-NON ADMIN						
NUMBER OF POSITIONS	45.00	46.79	49.59	50.38	52.17	53.97
SALARY COST	106028	118918	131950	146124	161750	178847
FRINGE BENEFIT COST	21388	23763	26369	29228	32350	35768
STAFF COST	127416	142681	158319	175352	194100	214615
INSTRUC AIDES AND SUPP STAFF						
NUMBER OF POSITIONS	59.00	61.26	63.53	65.79	68.05	70.32
SALARY COST	216045	240089	266416	295252	326822	361343
FRINGE BENEFIT COST	43214	48013	53283	59050	65366	72273
STAFF COST	259279	288102	319699	354302	392188	433616
CLERICAL-OFFICE PERSONNEL						
NUMBER OF POSITIONS	2.00	2.10	2.20	2.30	2.40	2.50
SALARY COST	6774	7611	8531	9543	10655	11876
FRINGE BENEFIT COST	1355	1522	1706	1909	2131	2375
STAFF COST	8129	9133	10237	11452	12786	14251
STAFF TOTALS FOR THE PROJECT						
NUMBER OF POSITIONS	159.25	165.44	171.67	177.88	184.09	190.30
SALARY COST	881636	978264	1084114	1199983	1326750	1465397
FRINGE BENEFIT COST	176327	195654	216822	240004	265344	293077
STAFF COST	1057963	1173918	1300936	1439987	1592094	1758474
TOTAL NSNCO COST	105084	110332	121439	140811	171153	219436
TOTAL CURRENT EXPENSE	1163047	1284250	1422573	1580798	1763247	1976910
CAPITAL OUTLAY COST	0	0	0	0	0	0
GROSS PROJECT COST(CE+CO)	1163047	1284250	1422573	1580798	1763247	1976910
TOTAL NON-CURRENT EXPENSE REVENUE	0	0	0	0	0	0
TOTAL LOCAL PROJECT COST	1163047	1284250	1422573	1580798	1763247	1976910

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Exhibit C

PLANNING UNITS IN THE PROJECT BY STATUS CODE

SUBPROGRAM STATUS CODE

803	EDUC DISADV-CADWALADER-ET
804	EDUC DISADV-COLUMBUS-TI
805	EDUC-DISADV-COOK-ET
807	EDUC DISADV-PROJ READING
807	EDUC DISADV-PROJ READING
810	EDUC DISADV-JEFFERSON-ET
821	EDUC DISADV-JONES-ET
811	EDUC DISADV-MONUMENT-ET
812	EDUC DISADV-MOTT-TI
813	EDUC DISADV-PARKER-ET
815	EDUC DISADV-STOKES-TI
817	EDUC DISADV-WILSON-ET

PROJECT STATUS CODE

NONE

PROJECT DESIGN STATUS CODE

NONE

Exhibit C (continued)

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SITE TITLE: COLUMBUS SCHOOL SITE CODE: 4

CURRENT EXPENSE STAFF POSITIONS AND COSTS BY STAFF TYPE	CY	Y1	Y2	Y3	Y4	Y5
PRINCIPALS/VICE PRINCIPALS						
NUMBER OF POSITIONS	0.99	0.99	0.99	0.99	0.99	0.99
SALARY COST	15048	16101	17229	18434	19724	21105
FRINGE BENEFIT COST	3009	3220	3445	3686	3944	4221
STAFF COST	18057	19321	20674	22120	23668	25326
TEACHER A-EC,PRIMARY,ELEM						
NUMBER OF POSITIONS	12.00	12.37	12.68	13.29	13.76	14.38
SALARY COST	123600	130293	151889	167456	185782	207458
FRINGE BENEFIT COST	24720	27258	30378	33531	37156	41492
STAFF COST	148320	163551	182267	201187	222938	248950
TEACHER C-SPECIAL EDUCATION						
NUMBER OF POSITIONS	11.00	10.78	10.78	10.57	10.46	10.35
SALARY COST	116550	122683	131270	137650	145783	154379
FRINGE BENEFIT COST	23390	24537	26254	27530	29157	30876
STAFF COST	140340	147220	157524	165180	174940	185255
INSTRUCTINAL SPECIALIST						
NUMBER OF POSITIONS	1.23	1.24	1.27	1.29	1.31	1.35
SALARY COST	10815	11742	12929	14057	15386	16935
FRINGE BENEFIT COST	2162	2346	2585	2811	3077	3388
STAFF COST	12977	14090	15514	16868	18463	20323
HEALTH PERSONNEL						
NUMBER OF POSITIONS	0.99	1.01	1.04	1.06	1.09	1.12
SALARY COST	10791	11749	12968	14140	15517	17128
FRINGE BENEFIT COST	2158	2350	2593	2827	3103	3426
STAFF COST	12949	14099	15561	16967	18620	20554
OPER-MAINT-FACILITIES-NON AD						
NUMBER OF POSITIONS	6.93	6.93	6.93	6.93	6.93	6.93
SALARY COST	27176	29078	31115	33292	35623	38116
FRINGE BENEFIT COST	5436	5816	6222	6659	7125	7623
STAFF COST	32612	34894	37337	39951	42748	45739
INSTRUC AIDES AND SUPP STAFF						
NUMBER OF POSITIONS	0.75	0.77	0.80	0.83	0.86	0.89
SALARY COST	2700	2974	3313	3654	4048	4516
FRINGE BENEFIT COST	540	595	662	730	810	903
STAFF COST	3240	3569	3975	4384	4858	5419
CLERICAL-OFFICE PERSONNEL						
NUMBER OF POSITIONS	0.99	0.99	0.99	0.99	0.99	0.99
SALARY COST	7029	7521	8048	8610	9214	9859
FRINGE BENEFIT COST	1406	1505	1609	1721	1843	1971
STAFF COST	8435	9026	9657	10331	11057	11830

Exhibit D

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STAFF TOTALS FOR THE SITE

NUMBER OF POSITIONS	34.68	35.08	35.69	35.94	36.39	36.98
SALARY COST	314109	338141	368761	397493	431077	469496
FRINGE BENEFIT COST	62821	67629	73748	79495	86215	93900
STAFF COST	376930	405770	442509	476988	517292	563396
TOTAL NSNCO COST	23066	24217	26698	30906	37567	47947
TOTAL CURRENT EXPENSE	399996	429987	469207	507894	554859	611343
CAPITAL OUTLAY COST	676	744	900	1198	1754	2824
GROSS SITE COST(CE+CO)	400672	430731	470107	509092	556613	614167
TOTAL NON-CURRENT EXPENSE REVENUE	0	0	0	0	0	0
TOTAL LOCAL SITE COST	400672	430731	470107	509092	556613	614167

SUBSIDIARY DATA

PLANNING UNITS AT THE SITE BY STATUS CODE

SUBPROGRAM STATUS CODE

104 EARLY CHLDHD-COLUMBUS
204 PRIMARY-COLUMBUS
304 ELEMENTARY-COLUMBUS
604 SPECIAL ED-COLUMBUS

PROJECT STATUS CODE

NONE

PROJECT DESIGN STATUS CODE

NONE

Exhibit D (continued)

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TRENTON SCHOOL DISTRICT
RESOURCE REQUIREMENTS SUMMARY REPORT

CURRENT EXPENSE	CY	Y1	Y2	Y3	Y4	Y5
STAFF COSTS						
SALARY COST	14877751	16261850	17853055	19617033	21564143	23705644
FRINGE BENEFIT COST	2975553	3252369	3570606	3923404	4312539	4741117
STAFF COST	17853304	19514219	21423671	23540434	25876682	28446761
TOTAL NSNCO COSTS	4128914	4329702	4773489	5525898	6715734	8572399
TOTAL CURRENT EXPENSE	21982218	23843921	26197160	29066332	32593716	37019160
CAPITAL-OUTLAY COST	224707	247175	299081	398376	582818	938631
TOTAL GROSS COST(CE+CO)	22206925	24091096	26496241	29464408	33176534	37957791
TOTAL NON-CURRENT EXPENSE REVENUES	0	0	0	0	0	0
TOTAL NET(LOCAL) COST(GROSS-NCE REV)	22206925	24091096	26496241	29464408	33176534	37957791

SUBSIDIARY DATA

INFLATION RATE FOR NSNCO COST TYPE 1 TO 4	0.050	0.050	0.0	0.0
INFLATION RATE FOR CAPITAL OUTLAY COST	0.100			

	EXPECTED TURNOVER RATE	SALARY COST INFLATION PERCENT(CY)	FRINGE BENEFIT PERCENT
CENTRAL ADMIN AND PROG MGRS	0.150	0.070	0.200
PRINCIPALS/VICE PRINCIPALS	0.150	0.070	0.200
ADMIN STAFF(PROF/TECHNICAL)	0.150	0.070	0.200
TEACHER A-EC,PRIMARY,ELEM	0.150	0.070	0.200
TCHR B-INTERMED,SEC,CONT	0.150	0.070	0.200
TEACHER C-VOC-TECHNICAL	0.150	0.070	0.200
TEACHER G-SPECIAL EDUCATION	0.150	0.070	0.200
INSTRUCTIONAL SPECIALIST	0.150	0.070	0.200
HEALTH PERSONNEL	0.150	0.070	0.200
TRANSPORTATION-NON ADMIN	0.150	0.070	0.200
FOOD SERVICES-NON ADMIN	0.150	0.070	0.200
OPER-MAINT-FACILITIES-NON AD	0.150	0.070	0.200
INSTRUC AIDES AND SUPP STAFF	0.150	0.070	0.200
CLERICAL-OFFICE PERSONNEL	0.150	0.070	0.200
MISCELLANEOUS	0.150	0.070	0.200

Exhibit E

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STAFF TYPE		CY	Y1	Y2	Y3	Y4	Y5
CENTRAL ADMIN AND PROG MGRS	POSITIONS	44.09	44.09	44.09	44.09	44.09	44.09
TURNOVER RATE 0.150	HIRES	0.0	0.01	0.01	0.01	0.01	0.01
PRINCIPALS/VICE PRINCIPALS	POSITIONS	34.24	34.24	34.24	34.24	34.24	34.24
TURNOVER RATE 0.150	HIRES	0.0	5.14	5.14	5.14	5.14	5.14
ADMIN STAFF(PROF/TECHNICAL)	POSITIONS	40.57	43.74	47.00	50.35	53.32	55.95
TURNOVER RATE 0.150	HIRES	0.0	9.26	9.82	10.40	10.52	10.63
TEACHER A-EC,PRIMARY,ELEM	POSITIONS	445.68	460.90	477.29	494.80	512.89	532.31
TURNOVER RATE 0.150	HIRES	0.0	82.07	85.53	89.10	92.31	96.35
TCHR B-INTERMED,SEC SEC,CONT	POSITIONS	323.00	334.12	344.93	356.74	368.38	381.11
TURNOVER RATE 0.150	HIRES	0.0	59.57	60.93	63.55	65.66	67.56
TEACHER C-VOC-TECHNICAL	POSITIONS	21.00	21.26	21.60	21.86	22.20	22.63
TURNOVER RATE 0.150	HIRES	0.0	3.41	3.53	3.50	3.52	3.75
TEACHER C-SPECIAL EDUCATION	POSITIONS	54.00	48.82	48.33	47.58	47.82	47.02
TURNOVER RATE 0.150	HIRES	0.0	6.92	6.82	6.51	7.39	6.97
INSTRUCTINAL SPECIALIST	POSITIONS	151.41	156.33	161.78	167.65	173.71	179.85
TURNOVER RATE 0.150	HIRES	0.0	27.83	28.93	30.14	31.21	32.20
HEALTH PERSONNEL	POSITIONS	37.54	38.48	39.55	40.69	41.93	43.21
TURNOVER RATE 0.150	HIRES	0.0	6.57	6.84	7.07	7.31	7.60
TRANSPORTATION-NON ADMIN	POSITIONS	0.0	0.0	0.0	0.0	0.0	0.0
TURNOVER RATE 0.150	HIRES	0.0	0.0	0.0	0.0	0.0	0.0
FOOD SERVICES-NON ADMIN	POSITIONS	90.00	93.24	96.54	99.93	103.40	106.96
TURNOVER RATE 0.150	HIRES	0.0	16.74	17.29	17.87	18.45	19.07
OPER-MAINT-FACILITIES-NON AD	POSITIONS	250.16	250.16	250.16	250.16	250.16	250.16
TURNOVER RATE 0.150	HIRES	0.0	37.52	37.52	37.52	37.52	37.52
INSTRUC AIDES AND SUPP STAFF	POSITIONS	160.62	166.11	171.53	177.02	182.23	187.69
TURNOVER RATE 0.150	HIRES	0.0	29.58	30.34	31.22	31.73	32.82
CLERICAL-OFFICE PERSONNEL	POSITIONS	119.32	118.73	119.40	119.55	119.71	119.88
TURNOVER RATE 0.150	HIRES	0.0	17.30	18.48	18.06	18.09	18.12
MISCELLANEOUS	POSITIONS	5.00	5.04	5.24	5.33	5.51	5.59
TURNOVER RATE 0.150	HIRES	0.0	0.84	0.92	0.88	0.98	0.91

Exhibit E (continued)

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Advantages and Limitations

The principal advantage of the planning unit approach is that it provides useful data for planners, without the need for a permanent program-structure and a pretentious system analysis of the agency. Because of its flexibility, and independence from conventional hierarchical organization schemes, it allows for creativity in the assignment of middle management staff, enabling the agency to match its program configuration to its current management talent.

Further, the concept of a plan as a unique set of planning units, and of alternative plans as alternative sets, has the effect of de-mystifying the process of comprehensive planning. A planning unit is a cluster of activities designed to have an incremental impact on the service criteria of the organization; thus, it is easier to project the expected marginal utility of alternative plans and to evaluate their subsequent performance.

The main disadvantages of the approach are two:

- first, it is not altogether consistent with the goals of fiscal management and control, in which consistency and uniformity are more desirable than creativity or analysis, and
- second, it places a substantial burden on the user, in that the definition of planning units is not a straightforward, "lawful" process, and may have to be re-done a few times until an adequate scheme is found.

It must be said of these limitations, however, that they are offset by the benefits of the approach. The latter objection should be regarded as an indication that creative, imaginative planning requires innovative approaches to data and its aggregation, and that straightforward, "idiot proof" models for analysis are inappropriate for planning.

The former objection--inconsistency with fiscal control requirements--is more problematical. The effect of the planning unit approach is to further differentiate, and separate, the planning and control functions of the agency, and, on this basis, the approach would seem inconsistent with the ideals of planning-programming-budgeting. In fact, it is the observation of these authors that current attempts to fully integrate top level planning and management with ongoing operational control have resulted largely in the "capture" of the planning process by business and accounting executives. To the degree that planning options are constrained by the operational complexities of payroll generation, monthly fiscal reports, and routine bookkeeping--to that degree strategic and long range planning suffer. We are prepared to assert, at this stage of our work, that a separation of planning from control is, in the main, a necessary prerequisite to adequate planning itself.

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